



Tommy Battle  
Mayor

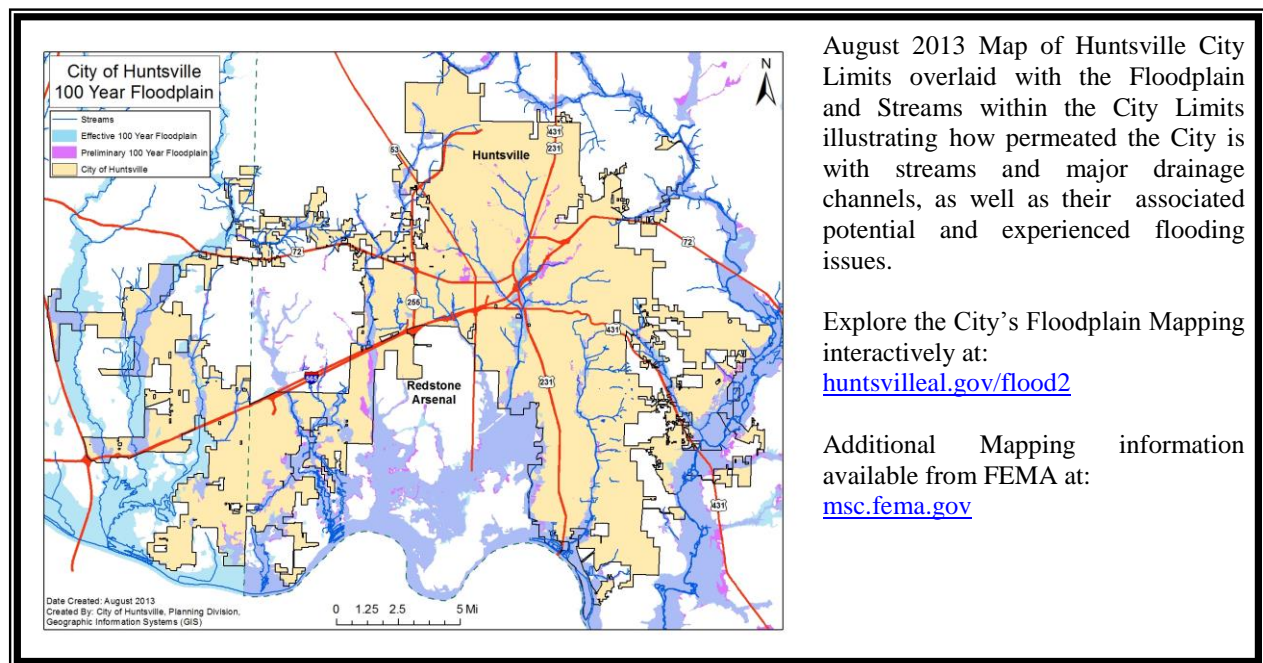
Kathy Martin, P.E.  
Director of  
City Engineering

2013

**Re: Flooding & Flood Protection**

Dear Huntsville Resident &/or Property Owner:

**The Federal Emergency Management Agency (FEMA) has designated at least a portion of your property (&/or in some cases a portion of property a structure you occupy is on) as being located in an Effective or Preliminary Special Flood Hazard Area (SFHA). This notice is being sent to all such property owners (and street addresses of structures where property owner addresses were not available or different) located in the SFHA in order to provide general information related to Floodplains, including some of the associated risks and efforts that can be made to reduce risks. Ultimately this notice is part of an effort by the City of Huntsville (City) to maintain rate reductions on Citizens' FEMA backed flood insurance through FEMA's own Community Rating System (CRS) program.**



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For those recipients who own multiple pieces of property within the City and are unsure as to which property this notice pertains to, you can visit [emaps.emapsplus.com/madisoncoal/](http://emaps.emapsplus.com/madisoncoal/) . On the top of the page in a drop down menu you can search for a particular piece of property by PPIN (Property Personal Identification Number). If you are unsure of the PPIN for the property this mail out is in reference to, it can be found at the top of the address label for this mail out.

In the case of the City, the SFHA is broken down into two Zones, AE and A, on FEMA Flood Insurance Rate Maps (FIRMs). These zones are more commonly referred to as the 100-year (yr.), 1% (1/100) Annual Chance, or Base Floodplain. In general and going forward in this letter, these zones are referred to simply as the Floodplain. The Floodplain itself has two parts, the Floodway and the Flood-Fringe; however, only within AE Zones in the City Limits is the Floodway clearly defined. In general, the Floodway encompasses the primary channel and some portion of area on either side; the remainder of the Floodplain beyond the Floodway is the Flood-Fringe (in some locations there is only Floodway and no Flood-Fringe). The Floodway is the more hazardous portion of the Floodplain as it has higher water velocities and generally deeper water. The Floodway is also the more restrictive portion of the Floodplain as it is more essential to the conveyance of water.

### **Local Flood Hazards**

Based on 2010-13 information, there are greater than 34.15 square miles and more than 8,929 developed properties (based on addresses) in the Floodplain within the City. This accounts for approximately 15.97% of the City land area and roughly 13.02% of developed City property (again, based on addresses).

In general, the Floodplain defines the areas subject to overbank and low-lying flooding, but keep in mind that any area adjacent to/near a waterway or that is depressed topographically can be. Other types of flooding, such as flash-flooding on mountain sides and localized flooding in areas where outdated storm water infrastructure is inadequate to convey all runoff water can also occur.

Floodwaters can rise quickly. For example, in the June 1999 flood on Aldridge Creek, waters rose 8-feet (ft.) in 25-minutes (min.). This type of flooding brings the added hazard of catching people off guard, especially at night. Regrettably, one person drowned attempting to drive over a flooded bridge in the southern part of the City during that event.

In May 2003, the City was subject to another major flood event causing general flooding the likes of which had not been seen since 1973. It served as a reminder that many areas, including those not in the floodplain, can suffer flood damage. At least one home on the side of Monte Sano Mountain suffered flood damage to a wooden floor, furniture, rugs, and wallboard. Additionally during that event, flash flooding occurred along Fagan Creek and one-third of the Huntsville Hospital Emergency Room flooded.

The longer materials are wet, the more moisture, sediment, and pollutants they will absorb. Wooden items may become so badly warped that they cannot be used. Other materials such as upholstery, carpets, mattresses, and books are not usually worth drying out and restoring. Electrical appliances and gasoline engines will not work safely until professionally dried and cleaned.

Select City Engineering Division (256-427-5300) and Huntsville-Madison County Emergency Management Agency (256-427-5130) staff are available to provide a level of site specific flood related data (select historic information and Elevation Certificates).

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### **What the City is doing about Flood Protection**

The City continues to implement a variety of flood protection activities. These include:

- ✓ Conducting a regular inspection and clearing program for ditches and channels.
- ✓ Providing select staff for site visits to review and advise on flood, drainage, and storm sewer problems.
- ✓ Providing reference materials and advice on flood protection for homes and businesses.
- ✓ Working towards modeling/mapping significant waterways.
- ✓ Acquiring and clearing high hazard flood areas and converting the land from damage-prone development to public open space and greenways.
- ✓ Continuing enforcement of regulations for development and construction to minimize their exposure to flood damage, reduction of critical floodwater conveyance, and impact on storm water runoff.
- ✓ Working towards the goals of the comprehensive Floodplain Management Plan that was adopted by the City Council. The Floodplain Management Plan and related annual reports can be viewed via the City's website ([www.huntsvilleal.gov/engineering](http://www.huntsvilleal.gov/engineering)).



Repairing flood damage to the Fagan Creek channel (6/9/04)

### **Protecting Yourself from Flooding**

If you have experienced flooding or other similar water related problems in the past, you should not expect or wait for the problem to go away. Look into floodproofing measures and explore what might be applicable to your situation, as well as consider emergency measures. Additionally, check into flood insurance coverage through insurance agencies and other resources. Sources of information on these topics are discussed further in this mailing.

**Floodproofing:** Floodproofing a structure means altering it so floodwaters will not cause damage. Varying floodproofing techniques are appropriate for different situations; some guidelines include:

- ✓ If you have a basement or other below grade area, water damage hazards include surface flooding, storm sewer back-up, and groundwater seepage. There are various ways to protect such areas, including sump-pump systems and those discussed in the following paragraphs; but, be careful about “dry floodproofing” (i.e., making walls watertight and closing/sealing all openings before floodwaters rise) basements, as the build-up of water pressure on the outside of walls can result in structural failures if not done properly.
- ✓ If your house is on a slab foundation (“slab-on-grade”) and subject to shallow flooding, consider a low floodwall, berm, or “dry floodproofing”.



Dry floodproofing and barriers can protect against shallow flooding, but all openings must be addressed.

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✓If your house is on a crawlspace, consider a low floodwall, berm, or “wet floodproofing.” Wet floodproofing involves moving all items subject to damage out of the crawl space and properly venting it so floodwaters can flow in and out without building up damaging water pressures on the foundation walls. Where floodwaters are deep enough to go over the first floor, further elevation of the structure may be a cost-effective protection measure.

An excellent source for more information is the *Homeowner's Guide to Retrofitting: Six Ways to protect Your House from Flooding* (FEMA publication 312) *Second Edition*. This publication and other similar ones can be read at the downtown Library, ordered (for free) from FEMA by calling 1-800-480-2520, or viewed and downloaded from FEMA's web site ([www.fema.gov/library/viewRecord.do?id=1420](http://www.fema.gov/library/viewRecord.do?id=1420)). Additionally, select City Engineering Division staff are available to advise and assist on retrofitting techniques.

**Emergency Measures:** No matter what kind of building you have, some last minute emergency measures can always help. For example, you could move valuable items (photos, antiques, and other “irreplaceable” items, etc.) or items that are subject to the most damage by floodwaters (upholstered furniture, mattresses, etc.) up to a higher elevation. You can also place sandbags and plastic sheeting in front of doorways and other low entry points. Additionally, flood safety guidance is provided at the end of this mailing.

Whatever emergency protection measures you use, it's always best to have an advance plan written to insure you don't forget anything once you're aware of potentially impending floodwaters. Additional information can be found at the following websites:

“Key Facts about Flood Readiness” [www.bt.cdc.gov/disasters/floods/readiness.asp](http://www.bt.cdc.gov/disasters/floods/readiness.asp) ,

“Are You Ready? – Floods” [www.fema.gov/areyouready/flood.shtm](http://www.fema.gov/areyouready/flood.shtm) ,

“What to do ‘During a Flood’” [www.fema.gov/hazard/flood/fl\\_during.shtm](http://www.fema.gov/hazard/flood/fl_during.shtm) , and

“Weather Preparedness” [www.srh.noaa.gov/hun/?n=preparedness](http://www.srh.noaa.gov/hun/?n=preparedness) .

**Flood Insurance:** Flood insurance is highly recommended. Remember, even if the last storm/flood missed you and/or you have implemented some sort of flood protection, the next flood could be worse. Also, keep in mind that homeowner's insurance policies generally do not cover a property for flood damage. Homeowners have a 26% chance of experiencing a flood during the life of a 30 year mortgage.

The City participates in the National Flood Insurance Program (NFIP.) Subsequently, insurance agents can sell flood insurance policies under rules and rates set by FEMA. All agents should charge the same rate for the same situation.

Any structure can be covered by a flood insurance policy. Detached garages and accessory structures are covered, to a degree, under the policy for the main structure; however, full separate coverage can also be obtained for such a building/structure. Structural coverage generally includes everything that stays with a building when it is sold, including the furnace, cabinets, built-in appliances, wall-to-wall carpeting, etc.; anything else, with some exceptions (except for money, valuable papers, and the like), would need to be covered on a

### **Flooding Pours Out Insurance Lessons**

**Excerpts from an article in the *Huntsville Times*, July 4, 1999**

...“We were glad we had it,” Richard Morgan said “I never resented it.”

The Morgans have flood insurance, but only partial coverage. “We’ve only got structural (coverage),” Terry Morgan said. “It didn’t ever occur to us to get contents [coverage].” ...

Jim and Cara Wedding, who are renting a house on Old Albany Circle, had up to 6 inches of water in their floor. They have renters insurance, but didn’t take the rider for flood coverage.

“We were trying to save money,” said Jim Wedding, who now plans to look into obtaining flood coverage. Cara Wedding said residents need to be more informed about the various types of flood insurance coverage available....

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contents policy. Renters can buy contents coverage, even if the owner does not buy structural coverage. Generally, during the kind of flooding that the City experiences, both structural and content damage occur. Items located outside of a structure (e.g. driveways, landscaping, etc.) are not eligible for coverage.

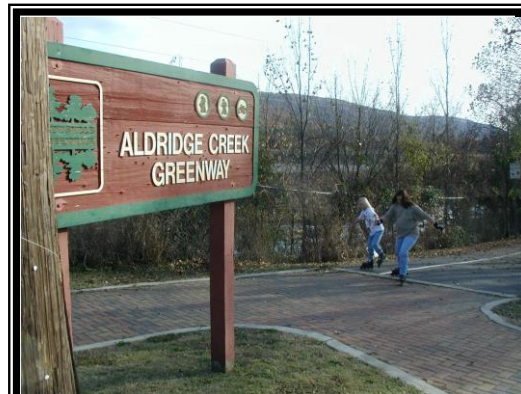
Flood Insurance is required by lending institutions when providing a federally insured mortgage/home equity loan for a structure in the Floodplain. Usually these policies just cover the structure, and not the contents. A general summary of coverage information is available at [www.fema.gov/library/viewRecord.do?id=3011](http://www.fema.gov/library/viewRecord.do?id=3011).

**Don't wait for the next forecast of rain. There is a 30-day waiting period before National Flood Insurance coverage takes effect. Contact an insurance agent for more information.**

### Natural and Beneficial Floodplain Functions

Floodplains are more than just hazardous locations for development. They provide habitat for flora and fauna, groundwater recharge area, and space for recreation. Several City parks and "green spaces" front on streams, providing a more aesthetically enjoyable scenic setting.

The City has completed the Flint River Greenway Phase 2 & 3 projects from the end of Phase 1 (northwest of the Old Highway 431 and Burress Rd. intersection) heading north up-river to just south of the Old Highway 431 Bridge over the Flint. Additionally, about half of the Aldridge Greenway Phase 4 from Mountain Gap Rd. north to about 500-ft. north of the Country Lane Dr. and Bailey Cove Rd. intersection has also been completed. For further information about existing greenways and proposed greenway projects please contact the City Planning Department 256-427-5100.

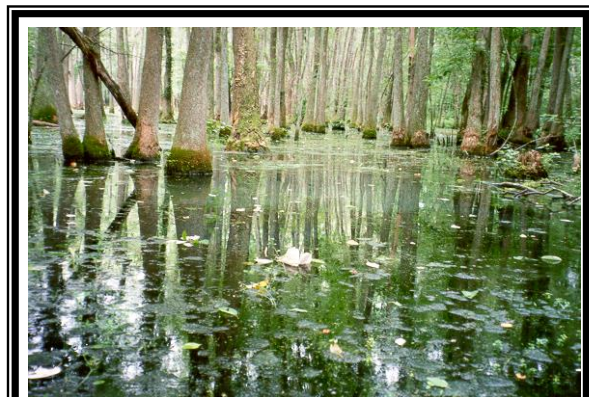


Several City floodplains are being converted to public open space as part of a watershed master plan.

Vegetated and undeveloped areas, such as wetlands, absorb more rain and runoff water than urbanized areas, helping reduce flood flows. Vegetation also reduces flood velocities and erosion, and helps filter pollutants from storm water runoff. Wetland areas are also used by a variety of wildlife species, providing habitat for some that cannot live or breed anywhere else.

Many areas in Huntsville have been identified as wetlands, but it is estimated that the City has lost over 90% of its wetlands since 1947. It is important that we preserve such natural areas. While some development is allowed, the City, State, and Federal agencies make sure that the natural benefits of any filled wetlands are compensated by creation of additional or improved wetland habitats relatively nearby.

For years the City has preserved Floodway and wetland properties, the largest of which are the approximately 600-acres (ac.) Hays Nature Preserve on the Flint River, 400-ac. Goldsmith Schiffman



Spring-fed Tupelo Swamp  
on Redstone Arsenal

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Wildlife Sanctuary, and a roughly 100-ac. Tennessee River property (previously General Shale quarry).

Since 2003, the City has been planning a Wetland Mitigation Bank at Goldsmith Schiffman to restore lost and enhances existing wetlands, as well as compensate for local losses elsewhere due to development. A Mitigation Banking Instrument (MBI) will allow the City to open and run such a Wetlands Mitigation Bank. The MBI was re-submitted in August to the mitigation Banking Review Team (MBRT), which consists of seven required State and Federal agencies, for further review following revisions based on previous review comments. City representatives have also met with the U. S. Army Corps of Engineers (USACE), the regulating agency and member of the MBRT, indications were that the MBI should go into public comment period next. Once USACE ultimately approves the MBI becomes the living document that allows the Bank to move forward.

For further information about City managed wetlands contact Landscape Management 256-564-8030.

Another concern is water quality. The storm water drainage system carries untreated runoff directly to streams. Pouring wastes on the ground or into the storm drainage system directly impacts the environment. Oil, paint, fertilizer, pesticides, etc. pollute the water, destroy plants, and endanger wildlife. For example, 1-gallon (gal.) of motor oil can: create an oil slick on surface water up to 8-ac. in size, contaminate 1,000,000-gal. of fresh water (a 1-year supply of water for 50 people), or render a 4-ac. area unusable for planting for decades. Everyone needs to do their part to help keep our streams and storm drainage system free of pollutants. Contact the City's Solid Waste Disposal Authority at [www.swdahsv.org](http://www.swdahsv.org) or 256-880-6054 for information about appropriate hazardous product disposal.

### **Flood Protection Regulations**

In general, lots should be designed and constructed so water flows away from principle structures and along property lines to the street and storm water drainage system. Fences, railroad ties, landscaping, regrading, as well as construction projects can block or detain this flow when inappropriately located.

✓Every piece of trash can contribute to flooding. Even grass clippings and branches can accumulate and plug drainage pipes and channels. If your property is next to a waterway or a storm water runoff detention pond, please do your part and keep the area clear of debris.

✓Always check with the Engineering Division (320 Fountain Circle, 256-427-5300) before you build on, fill, regrade, or alter your property as Floodplain Development Permits (FDPs), as well as other permits, are generally required to ensure that such projects do not cause problems.

✓Do not dump or throw anything into waterways or detention basins. Dumping in a stream or detention pond is a violation of the City "Code of Ordinance" (Ordinance).

✓Read about the City's dumping regulations online at the City website [www.huntsvilleal.gov](http://www.huntsvilleal.gov) using "Quick Search" to do key word searches on "dumping," "debris," "trash," etc. Additionally the City's Ordinances are available online at [www.municode.com](http://www.municode.com). Once at the referenced site, selecting Online Library at the top, then the "Ala." state shape from the following graphic, and finally "Huntsville". This



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online information is provided for informational purposes only, official publications are available from the Office of the Clerk-Treasurer 256-427-5088.

✓Report illegal dumping and illicit discharge violations (especially in waterways & detention ponds) as follows: in general to Crime Stoppers 256-53-CRIME (256-532-7463) or Operation Green Team 256-532-5326, solid materials specifically to Operation Green Team 256-532-5326, chemical spills into the sanitary sewer system to the Water Pollution Control Department 256-883-3719, and all other chemical spills to the Natural Resources Department 256-427-5750.

✓If you observe any “soil” filling or construction in the Floodplain without a Floodplain Development Permit, contact the Engineering Division at 256-427-5300.

New structures in the floodplain must be constructed to be protected from flood damage. City Ordinance requires that new residential buildings (including attached garages, basements, and storm shelters) and additions must be elevated 1-ft. above the Base Flood Elevation (BFE). Similarly all utility equipment and appliances must be elevated to at least the BFE plus 1-ft. (BFE+1') and related components (including duct work) must be designed and/or located so as to prevent water from entering or accumulating within the components during flood conditions; beyond that, components must also be protected to an elevation of at least BFE+1'.

The Ordinance also requires that a building being substantially improved be treated as new construction in regard to meeting the current Ordinance. A substantial improvement is when cumulatively over time the value of alterations (including additions, renovations, &/or repairs, even if a result of fire, storm damage, natural causes, etc.) equals or exceeds 50% of the current market value of the existing structure (not including the property) prior to the beginning of construction for the first alteration or occurrence of fire/natural hazard damage (if it occurred first).

As an important note, there are additional restrictions/requirements for structures in the Floodway portion of the Floodplain. For example, a new structure or addition in the Floodway cannot cause a rise in the BFE.

These regulations are designed to protect you and your neighbors. By keeping the drainage system clear and getting the proper permits before you build, everyone can help prevent flooding and other drainage problems.

### **Flood Safety**

**Be informed about weather conditions.** Beyond local television and radio broadcasts, the National Oceanic & Atmospheric Administration (NOAA) Weather Radio (NWR) is a national network of radio stations broadcasting continuous weather information direct from a nearby National Weather Service (NWS) office. NWR broadcasts NWS warnings, watches, forecasts and other hazard information 24-hours (hrs.) a day. Special radio receivers or scanners capable of picking up the signal are required. More information is available from NWR at [www.nws.noaa.gov/nwr](http://www.nws.noaa.gov/nwr) or by calling the local NWS office at 256-890-8503. Additionally, the local Huntsville NWS office provides on-line forecasting at [www.srh.noaa.gov/hun/](http://www.srh.noaa.gov/hun/).

**If told to evacuate your home, do so immediately.** If the waters start to rise inside your house before you have evacuated, take a tool able to break through your roof from the inside out (axe, sledge hammer, etc.) and retreat to the second floor, the attic, and if necessary, the roof. Additionally, take nonperishable food, drinking-water, water resistant/proof cover, and dry clothing and blankets (in a water resistant/proof bag or container).

**Do not walk through flowing water.** Currents can be deceptive; 6-inches (in.) of moving water can knock a person off their feet. Use a pole or stick to ensure that the ground or structure is still there before you go through an area where the water is not flowing.

**“Turn Around, Don’t Drown.”** Do not drive through a flooded area. More people drown in their cars than anywhere else. Don’t drive around road barriers; the road or bridge may be washed out.

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**Look before you step.** After a flood, the ground and floors are covered with debris including broken bottles and nails. Floors and stairs that have been covered with mud can be very slippery.

**Stay away from power lines and electrical wiring.** After drowning, the number two flood related cause of death is electrocution. Electrical current can travel through water. Report downed power lines to Huntsville Utilities 256-535-1200.

**Be alert for gas leaks.** Use a flashlight to inspect for damage; don't smoke or use candles, lanterns, or open flames unless you know the gas has been turned off and the area has been ventilated. To report a gas leak or for general question regarding gas services, contact Huntsville Utilities 256-535-1200.

**Beware of deadly exhaust fumes.** Use generators or other gasoline powered machines, camping stoves, etc. and cook with charcoal outdoors only. Indoor use of such items can result in death by carbon monoxide poisoning.

**Clean everything that gets wet.** Floodwaters generally pick-up sewage and chemicals from roads, farms, factories, and storage buildings. Items that have come in contact with floodwaters such as food, cosmetics, and medicine can be health hazards. When in doubt, throw it out.

**Take good care of yourself and family.** Recovering from a flood is a big job. It is tough on both the body and the spirit, and the effects a disaster has on people may last a long time. Keep your eyes open for signs of anxiety, stress, and fatigue in yourself and your family.

#### **Federal Emergency Management Agency (FEMA) National Flood Insurance Program (NFIP) "Preliminary" Flood Insurance Rate Maps (FIRMs) County & City wide Revision**

The Alabama Department of Economic and Community Affairs (ADECA) division of the Office of Water Resources (OWR) as a Cooperating Technical Partner (CTP) with the Federal Emergency Management Agency (FEMA) has been updating the Flood Insurance Rate Maps (FIRMs) as a part of their Map Maintenance program. As a part of this effort, Madison County (including portions of the Cities of Huntsville and Madison in Limestone County) FIRMs have been preliminarily updated (in some cases twice). The following website, [huntsvilleal.gov/flood](http://huntsvilleal.gov/flood), allows a few ways to view the "Preliminary" Mapping for the City of Huntsville (City) as well as some additional items and information.

Although this Preliminary mapping is an update to fully replace the 1998 "Effective" mapping (current reports estimate this to occur in the summer of 2014), all areas have not necessarily changed or may have changed only subtly from the Effective mapping. That being said, there are areas of significant change especially those along streams not previously studied as well as those that were restudied. It is important to note that in these areas the new studies are based on more up-to-date data as well as improved modeling techniques to more accurately reflect current conditions.

The following two points are being provided here to address frequently asked questions: It is the City's understanding from FEMA that if a structure is in the Effective 100-yr. Floodplain, lending institutions should require the owner to carry Flood Insurance. Additionally, if any portion of a property is in the Effective or Preliminary 100-yr. Floodplain, it falls under City zoning requirements for Special Flood Hazard Areas (SFHA) and the City is required to regulate to the more restrictive of the two data sets.

**For more information on flood mitigation, drainage, or construction regulations contact the City of Huntsville Engineering Division at 320 Fountain Circle, 256-427-5300, and [huntsvilleal.gov/engineering](http://huntsvilleal.gov/engineering).**

**Other sources of flood related information included the downtown Huntsville-Madison County Library at 915 Monroe St. (free internet access provided), 256-532-5940, and [hpl.lib.al.us](http://hpl.lib.al.us); or the following websites: FEMA at [www.fema.gov](http://www.fema.gov) and [www.FloodSmart.gov](http://www.FloodSmart.gov); NFIP Direct Servicing Agent at [www.nfipservices.com/](http://www.nfipservices.com/); Huntsville-Madison County EMA at [www.madisoncountyema.com](http://www.madisoncountyema.com); the U.S. Army Corps of Engineers (USACE) at [www.usace.army.mil](http://www.usace.army.mil); and the Association of State Floodplain Managers (ASFPM) at [www.floods.org](http://www.floods.org).**

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